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09/183,335	10/30/1998	ROBERT A. FOSTER	M-7085US	3004
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1 UNITED STATES PATENT AND TRADEMARK OFFICE
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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
6

7 *Ex parte* ROBERT A. FOSTER
8
9

10 Appeal 2008-2193
11 Application 09/183,335
12 Technology Center 3600
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16 Decided: August 15, 2008
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18

19 Before LINDA E. HORNER, ANTON W. FETTING, and
20 STEVEN D.A. McCARTHY, *Administrative Patent Judges*.
21 FETTING, *Administrative Patent Judge*.

22 DECISION ON APPEAL

23 STATEMENT OF CASE

24 Robert A. Foster (Appellant) seeks review under 35 U.S.C. § 134 of a
25 final rejection of claims 1-29, the only claims pending in the application on
26 appeal.

We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b)
(2002).

We AFFIRM.

The Appellant invented a way for pricing financial transactions by defining product rules for each financial transaction, locating the appropriate product rule for a particular financial transaction, linking the product rule to a corresponding price table, calculating a price using the pricing method contained in the price table, and billing the appropriate party using the billing method contained in the price table. (Specification 2:24-32).

An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below [bracketed matter and some paragraphing added].

1. In a data processing system, a method for pricing financial transactions, said method comprising:

[1] creating, in a database system of the data processing system, a plurality of price tables;

[2] creating, in the database system, a plurality of product rules each applicable to one or more of said financial transactions, wherein each of said product rules is linked to one of said price tables; and

[3] for each one of said financial transactions:

[3a] identifying an applicable one of said product rules for said transaction; and

[3b] pricing said transaction according to the price table
linked to said identified applicable product rule.

This appeal arises from the Examiner's final Rejection, mailed May 18, 2006. The Appellant filed an Appeal Brief in support of the appeal on February 12, 2007. An Examiner's Answer to the Appeal Brief was mailed on June 19, 2007. A Reply Brief was filed on August 16, 2007.

PRIOR ART

The Examiner relies upon the following prior art:

Disclosed Prior Art, Applicant's Specification, pp. 1- 2.

Parsaye, Kamran & Chignell, Mark, "Expert Systems for Experts", John Wiley & Sons, 1988, pp. 35 - 60, 177 - 178, 191 - 210, and 295 - 309.

Hendler, James A., "Expert Systems: The User Interface", Ablex Publishing Corporation, Norwood, NJ, 1988, pp. 31, 46-47, 113 and 133.

REJECTIONS

Claims 1, 2, 4-16, and 19-22 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the disclosed prior art and Parsaye.

Claims 3, 17, 18, and 23-29 stand rejected under 35 U.S.C. § 103(a) as unpatentable over the disclosed prior art, Parsaye, and Hendler.

ISSUES

The issues pertinent to this appeal are

- Whether the Appellant has sustained its burden of showing that the Examiner erred in rejecting claims 1, 2, 4-16, and 19-22 under

35 U.S.C. § 103(a) as unpatentable over the disclosed prior art and Parsaye.

- Whether the Appellant has sustained its burden of showing that the Examiner erred in rejecting claims 3, 17, 18, and 23-29 under 35 U.S.C. § 103(a) as unpatentable over the disclosed prior art, Parsaye, and Hendler.

The pertinent issues turn on whether the applied art describes or suggests pricing a transaction according to a price table linked to an identified, applicable product rule.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

Facts Related to Claim Construction

01. The disclosure contains no lexicographic definition of “table.”
02. The ordinary and customary meaning of “table” within the database arts is an orderly arrangement of data, especially one in which the data are arranged in columns and rows in an essentially rectangular form.¹

Facts Related to Appellant’s Disclosure

03. The Specification states that within the existing art of pricing arrangements, such arrangements can take many shapes, e.g., by

¹ *American Heritage Dictionary of the English Language* (4th ed. 2000).

product; by time of submission; by specified execution time; by window of time between submission and execution; by transaction value; by pre-assigned payment slots; and/or by some combination of these. (Specification 2:2-7).

Parsaye

04. Parsaye is directed to expert systems (Parsaye: Title).

05. Parsaye describes various types of data structures for representing knowledge. Among those structures are facts and rules. Rules can be used to arrive at conclusions, which are new facts (Parsaye 35-36).

06. Parsaye describes how facts, rules, and knowledge hierarchies may be used to deal with both simple and complex tasks (Parsaye 38:Fourth ¶).

07. Parsaye describes how facts and rules need to be packaged. Such packages are usually referred to as frames in expert systems (Parsaye 48:¶ 2.3.3).

08. Parsaye describes how frames and rules may be implemented in relational databases (Parsaye 203:¶ 5.10).

09. Parsaye describes how the layout of a database table is referred to as a schema and the contents are referred to as records (Parsaye 204:¶ 5.101 to bottom of page).

Hendler

10. Hendler is directed to expert systems (Hendler: Title).

Facts Related To The Level Of Skill In The Art

11. Neither the Examiner nor the Appellant has addressed the level of ordinary skill in the pertinent arts of systems analysis and programming, database design, financial transaction processing, expert system design and programming, and financial pricing systems design. We will therefore consider the cited prior art as representative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’”) (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

Facts Related To Secondary Considerations

12. There is no evidence on record of secondary considerations of non-obviousness for our consideration.

PRINCIPLES OF LAW

Claim Construction

During examination of a patent application, pending claims are given their broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

Limitations appearing in the specification but not recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364,

1 1369 (Fed. Cir. 2003) (claims must be interpreted “in view of the
2 specification” without importing limitations from the specification into the
3 claims unnecessarily)

4 Although a patent applicant is entitled to be his or her own lexicographer
5 of patent claim terms, in *ex parte* prosecution it must be within limits. *In re*
6 *Corr*, 347 F.2d 578, 580 (CCPA 1965). The applicant must do so by placing
7 such definitions in the Specification with sufficient clarity to provide a
8 person of ordinary skill in the art with clear and precise notice of the
9 meaning that is to be construed. *See also In re Paulsen*, 30 F.3d 1475, 1480
10 (Fed. Cir. 1994) (although an inventor is free to define the specific terms
11 used to describe the invention, this must be done with reasonable clarity,
12 deliberateness, and precision; where an inventor chooses to give terms
13 uncommon meanings, the inventor must set out any uncommon definition in
14 some manner within the patent disclosure so as to give one of ordinary skill
15 in the art notice of the change).

16 *Obviousness*

17 A claimed invention is unpatentable if the differences between it and
18 the prior art are “such that the subject matter as a whole would have been
19 obvious at the time the invention was made to a person having ordinary skill
20 in the art.” 35 U.S.C. § 103(a) (2000); *KSR Int’l Co. v. Teleflex Inc.*, 127
21 S.Ct. 1727, 1729-30 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 13-14
22 (1966).

23 In *Graham*, the Court held that that the obviousness analysis is
24 bottomed on several basic factual inquiries: “[1] the scope and content of
25 the prior art are to be determined; [(2)] differences between the prior art and

1 the claims at issue are to be ascertained; and [(3)] the level of ordinary skill
2 in the pertinent art resolved.” 383 U.S. at 17. *See also KSR Int’l v. Teleflex*
3 *Inc.*, 127 S.Ct. at 1734. “The combination of familiar elements according to
4 known methods is likely to be obvious when it does no more than yield
5 predictable results.” *KSR*, at 1739.

6 “When a work is available in one field of endeavor, design incentives
7 and other market forces can prompt variations of it, either in the same field
8 or a different one. If a person of ordinary skill can implement a predictable
9 variation, § 103 likely bars its patentability.” *Id.* at 1740.

10 “For the same reason, if a technique has been used to improve one
11 device, and a person of ordinary skill in the art would recognize that it would
12 improve similar devices in the same way, using the technique is obvious
13 unless its actual application is beyond his or her skill.” *Id.*

14 “Under the correct analysis, any need or problem known in the field
15 of endeavor at the time of invention and addressed by the patent can provide
16 a reason for combining the elements in the manner claimed.” *Id.* at 1742.

17 *Automation of a Known Process*

18 It is generally obvious to automate a known manual procedure or
19 mechanical device. Our reviewing court stated in *Leapfrog Enterprises Inc.*
20 *v. Fisher-Price Inc.*, 485 F.3d 1157 (Fed. Cir. 2007) that one of ordinary
21 skill in the art would have found it obvious to combine an old
22 electromechanical device with electronic circuitry “to update it using
23 modern electronic components in order to gain the commonly understood
24 benefits of such adaptation, such as decreased size, increased reliability,

simplified operation, and reduced cost. . . . The combination is thus the adaptation of an old idea or invention . . . using newer technology that is commonly available and understood in the art.” *Id.* at 1163.

Obviousness and Nonfunctional Descriptive Material

Nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious. *In re Ngai*, 367 F.3d 1336, 1339 (Fed. Cir. 2004). *Cf. In re Gulack*, 703 F.2d 1381, 1385 (Fed. Cir. 1983) (when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability).

ANALYSIS

Claims 1, 2, 4-16, and 19-22 rejected under 35 U.S.C. § 103(a) as unpatentable over the disclosed prior art and Parsaye.

The Appellant argues these claims as a group.

Accordingly, we select claim 1 as representative of the group.
37 C.F.R. § 41.37(c)(1)(vii) (2007).

The Examiner found that the disclosed prior art in the Specification described using rules for pricing dependent on product and that the use of tables in a database system of a data processing system for storing pricing and rules was a known use of automating business processes as evidenced by Parsaye (Answer 4-6).

The Appellant contends that the claimed price tables and product rules are interacting entities of a database system, and this facet of the tables and rules is not described by the disclosed prior art (Appeal Br. 11:First full ¶).

1 The Appellant then contends that Parsaye fails to disclose or suggest claim
2 1's specific recitation of product rule entities and price tables (Appeal Br.
3 12:First ¶). The Appellant further contends that Parsaye's table cannot be
4 applied to the disclosed fee arrangements because Parsaye's table has a
5 schema, attributes and fields, which the disclosed fee arrangements do not
6 discuss (Appeal Br. 14:Bottom ¶).

7 The Examiner responds by providing a claim chart mapping claim 1 to
8 the applied art (Answer 12-13) and by responding that the disclosed fee
9 arrangements are equivalent to the price and rule content of claim 1 and that
10 Parsaye was relied upon to describe how one of ordinary skill would have
11 known to implement such pricing and rules within pricing tables that have
12 rules act upon the pricing (Answer 14-17).

13 The Appellant responds in turn by repeating the argument that the
14 disclosed fee arrangements do not show the structural implementation
15 (Reply Br. 4) and that the Specification gives a special meaning to a price
16 table as a data structure for storing prices and costs and therefore price tables
17 do not constitute fee agreements (Reply Br. 5), and a special meaning to
18 product rule as an entity which includes many attributes (Reply Br. 6).

19 We disagree with the Appellant. Claim 1 limitation [1] requires price
20 data implemented in database tables. The usual and customary meaning of
21 such tables is an orderly arrangement of data, especially one in which the
22 data are arranged in columns and rows in an essentially rectangular form (FF
23 01 & 02). Limitation [2] requires product rules associated with the pricing
24 implemented by linking the rule to a pricing table, and limitation [3] requires
25 pricing a product according to a rule. Setting aside the implementation

1 details in claim 1, the steps of creating prices and rules associated with the
2 prices and then using the rules to price product are fully met by the disclosed
3 prior art of using pricing arrangements based on product (FF 03). An
4 arrangement based on a product is a rule or set of rules for implementing
5 such an arrangement. Pricing arrangements are rules for creating prices.
6 Thus the pricing arrangements based on product disclosed as prior art is a set
7 of rules for implementing pricing of product based on the product. So we
8 are left with the issue of whether the implementation method in claim 1 is
9 described by the applied art.

10 Parsaye is a text on expert systems (FF 04) and describes how the use of
11 knowledge may be automated with expert systems using such data as facts,
12 rules and frames (FF 05 - 07). We find that the disclosed pricing
13 arrangements are a use of knowledge and that one of ordinary skill in the
14 expert systems arts would have readily seen that pricing arrangements
15 dependent on product were the type of knowledge that could be
16 implemented with expert systems. Conversely, one of ordinary skill in
17 financial transaction systems that conventionally performed pricing
18 computations was knowledgeable at least of the existence and basic
19 capabilities of expert systems, since the use of expert systems is pervasive in
20 the computer science arts as evidenced by Parsaye.

21 Although the Appellant argues that the disclosure does not provide any
22 suggestion of such implementation details as databases and rules, the
23 Appellant is simply attacking the references separately, even though the
24 rejection is based on the combined teachings of the references.
25 Nonobviousness cannot be established by attacking the references

1 individually when the rejection is predicated upon a combination of prior art
2 disclosures. *See In re Merck & Co. Inc.*, 800 F.2d 1091, 1097 (Fed. Cir.
3 1986).

4 Expert systems were a notoriously well known implementation
5 mechanism for knowledge as explicitly taught by Parsaye. Parsaye
6 describes how any set of facts and rules may be modeled with expert
7 systems (FF 05), which would suggest to one of ordinary skill any relatively
8 simple arrangement such as the disclosed pricing arrangements.

9 Parsaye also describes how such facts and rules may be implemented in
10 a database table (FF 08). The relational aspects of Parsaye's relational
11 database provides the linkage that implements the association between rules
12 and facts. Since product prices are facts, Parsaye's description suggested to
13 one of ordinary skill, tasked with implementing the disclosed pricing
14 arrangements by product, to use prices and rules stored and linked in
15 relational database tables. This implementation then meets the limitations of
16 claim 1.

17 The Appellant has not sustained its burden of showing that the Examiner
18 erred in rejecting claims 1, 2, 4-16, and 19-22 under 35 U.S.C. § 103(a) as
19 unpatentable over the disclosed prior art and Parsaye.

20 *Claims 3, 17, 18, and 23-29 rejected under 35 U.S.C. § 103(a) as*
21 *unpatentable over the disclosed prior art, Parsaye, and Hendler.*

22 The Appellant relies on its arguments in support of claim 1 to argue the
23 patentability of these claims, which we found did not meet the Appellant's
24 burden (Appeal Br. 15-16). Although the Appellant makes a generic

1 argument in support of the limitations of these claims for the first time in the
2 Reply Brief at 9, the Appellant does no more than list the claims themselves
3 and make a general contention that Hendler fails to show the limitations. In
4 particular, the Appellant does not address the specific teachings of Hendler
5 on which the Examiner relies in support of the rejection (Answer 8-11). A
6 statement which merely points out what a claim recites will not be
7 considered an argument for separate patentability of the claim (37 C.F.R.
8 § 41.37(c)(1)(vii)).

9 Thus, the Appellant has not sustained its burden of showing that the
10 Examiner erred in rejecting claims 3, 17, 18, and 23-29 under 35 U.S.C.
11 § 103(a) as unpatentable over the disclosed prior art, Parsaye, and Hendler.

12 CONCLUSIONS OF LAW

13 The Appellant has not sustained its burden of showing that the Examiner
14 erred in rejecting claims 1-29 under 35 U.S.C. § 103(a) as unpatentable over
15 the prior art.

16 DECISION

17 To summarize, our decision is as follows:

- 18 • The rejection of claims 1, 2, 4-16, and 19-22 under 35 U.S.C. § 103(a)
19 as unpatentable over the disclosed prior art and Parsaye is sustained.
- 20 • The rejection of claims 3, 17, 18, and 23-29 under 35 U.S.C. § 103(a)
21 as unpatentable over the disclosed prior art, Parsaye, and Hendler is
22 sustained.

No time period for taking any subsequent action in connection with this
appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

vsh

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